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7 UNITED STATES DISTRICT COURT
8 WESTERN DISTRICT OF WASHINGTON
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10 ELECTRONIC SCRIPTING PRODUCTS, INC.,
11

12 Plaintiff,

13 v.

14 ENDEAVOR ONE, INC.,
15

16 Defendant.
17

Civil Action No.

COMPLAINT FOR PATENT
INFRINGEMENT

JURY DEMAND

18 **1. COMPLAINT FOR PATENT INFRINGEMENT**
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20 2. COMES NOW, Plaintiff ELECTRONIC SCRIPTING PRODUCTS, INC.
21 (“ESPi”) or its Complaint against Defendant ENDEAVOR ONE, INC. (“Endeavor One”),
22 alleges as follows:
23

24 **THE PARTIES**

25 1. Plaintiff Electronic Scripting Products, Inc. (“ESPi”) is a company organized under
26 the laws of the State of Delaware, having its principal place of business located at 446 Old
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28 ELECTRONIC SCRIPTING PRODUCTS, INC. v. ENDEAVOR ONE, INC.
Complaint for Patent Infringement

County Road, Suite 201, Pacifica, CA 94044 and mailing address at 555 Bryant Street #142, Palo Alto, CA 95301.

2. On information and belief, Endeavor One, Inc. is a registered corporation in the state of Washington.

JURISDICTION AND VENUE

3. This is an action for patent infringement in violation of the Patent Act of the United States, 35 U.S.C. §§ 1 *et seq.*

4. This Court has original and exclusive subject matter jurisdiction over the patent infringement claims for relief under 28 U.S.C. §§ 1331 and 1338(a).

5. This Court has personal jurisdiction over Endeavor One because it maintains a regular and established place of business in this District. On information and belief, Endeavor One has transacted and is continuing to transact business in this District that includes, but is not limited to, committing acts of patent infringement giving rise to this action by use and sale of products and systems that practice the subject matter claimed in the patent involved in this action.

6. Venue is proper in this district under 1400(b) because Endeavor One (1) is incorporated in the State of Washington and (2) has a regular and established place of business in this District and has committed acts of infringement here.

FACTS

7. On January 5, 2016, United States Patent No. 9,229,540 B2 entitled “Derviving Input From Six Degrees Of Freedom Interfaces” was duly and legally issued. A true and correct copy of United States Patent No. 9,229,540 B2 (“the ’540 Patent”) is attached hereto as Exhibit A and incorporated herein by this reference.

8. Plaintiff is the assignee of the entire right, title and interest in and to the ’540 Patent, including all rights to enforce the ’540 Patent and to recover for infringement.

9. Claim 1 of the ’540 Patent claims:

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1 1. An interface for producing an input from an absolute pose of an item associated
2 with a user in a three-dimensional environment, said interface comprising:

3 a) a unit on-board said item, said unit configured to receive non-collinear optical
4 inputs presented by at least one stationary object in said three-dimensional
5 environment, said at least one stationary object having at least one feature detectable
6 via an electromagnetic radiation, said at least one feature presenting a sufficient
7 number of said non-collinear optical inputs for establishing a stable frame in said
8 three-dimensional environment;

9 b) processing electronics employing a computer vision algorithm using a
10 homography to recover said absolute pose of said item from a geometrical description
11 of said non-collinear optical inputs in terms of absolute pose parameters in said stable
12 frame and to generate a signal related to at least one of said absolute pose parameters;

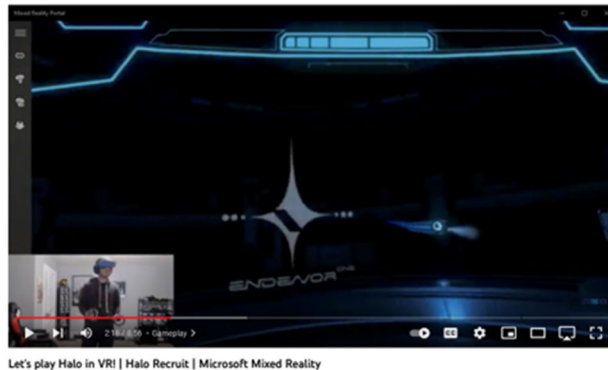
13 c) an application employing said signal in said input, wherein said absolute pose
14 of said item comprises at least three translational degrees of freedom and at least three
15 rotational degrees of freedom, said at least one absolute pose parameter is related to at
16 least one among said at least three translational degrees of freedom and said at least
17 three rotational degrees of freedom by a mapping and at least one aspect of said
18 application varies with said absolute pose of said item.

19 10. On information and belief, Endeavor One infringes Claim 1 of the '540 Patent by
20 making, using, selling and/or offering to sell products in the United States, including in this
21 District, that incorporate augmented or virtual reality ("Accused Products").

22 11. Endeavor One infringes each element of Claim 1 as follows:

23 "An interface for producing an input from an absolute pose of an item associated
24 with a user in a three-dimensional environment, said interface comprising:" – To the
25 extent that the preamble is included in the infringement analysis, Endeavor One has an
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interface for producing an input from an absolute pose of an item, in this case a Virtual Reality Headset (VR HMD)



The VR HMD is a wearable item, namely a piece of headgear (HMD – Head-Mounted Display) such as Oculus or other VR HMD that is associated with a user in a three-dimensional environment and these VR HMDs use Qualcomm’s Snapdragon reference design (VR/MR/XR) or an analogous program.

“a) a unit on-board said item, said unit configured to receive non-collinear optical inputs presented by at least one stationary object in said three-dimensional environment, said at least one stationary object having at least one feature detectable via an electromagnetic radiation, said at least one feature presenting a sufficient number of said non-collinear optical inputs for establishing a stable frame in said three-dimensional environment” – Endeavor One uses a unit on-board the item (i.e., a unit on-board the HMD), where this unit is the on-board camera(s) that receive non-collinear optical inputs.

Inside-out tracking systems typically use cameras and computer vision technology to locate a user in 3D space. This same technique is also used to “lock” virtual content at specific physical locations.

The non-collinear optical inputs are presented by at least one stationary object in the three-dimensional environment. In other words, it uses a tracked environment that “lock” virtual content to the physical location in the three-dimensional environment:

and all input tracking will be unavailable. If the user is wearing a headset the UA is expected to present a tracked environment (a scene which remains responsive to user’s head motion) or reproject the throttled content when the

The at least one stationary object having at least one feature detectable via an electromagnetic radiation and having sufficient number of non-collinear optical inputs for establishing a stable frame in the three-dimensional environment, here Endeavor One uses stationary objects in the environment



Let's play Halo in VR! | Halo Recruit | Microsoft Mixed Reality

and stable frame is obtained from frames at framerate of cameras in XR HMD:

The session should continue requesting and drawing frames while blurred, but should not depend on them being processed at the normal XR hardware device framerate. The UA may use these frames as part of its tracked environment or page composition, though the exact presentation of frames produced by a blurred session will differ between platforms. They may be partially occluded, literally blurred, greyed out, or otherwise de-emphasized.

Endeavor One uses electromagnetic radiation, since the VR HMD camera(s) are subject to occlusions and blurring of features detectable by electromagnetic radiation while frames track the environment.

“b) processing electronics employing a computer vision algorithm using a homography to recover said absolute pose of said item from a geometrical description of said non-collinear optical inputs in terms of absolute pose parameters in said stable frame and to generate a signal related to at least one of said absolute pose parameters” – Endeavor One uses electronics employing a computer vision algorithm using homography (homography aka projective or perspective transformation) to recover the absolute pose of the item or VR HMD from viewer perspective:

From a geometrical description of the non-collinear optical inputs in terms of

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Each XRFrame the scene will be drawn from the perspective of a "viewer",
which is the user or device viewing the scene, described by an XRViewerPose .
Developers retrieve the current XRViewerPose by calling getViewerPose()
on the XRFrame and providing an XRReferenceSpace for the pose to be
returned in. Due to the nature of XR tracking systems, this function is not
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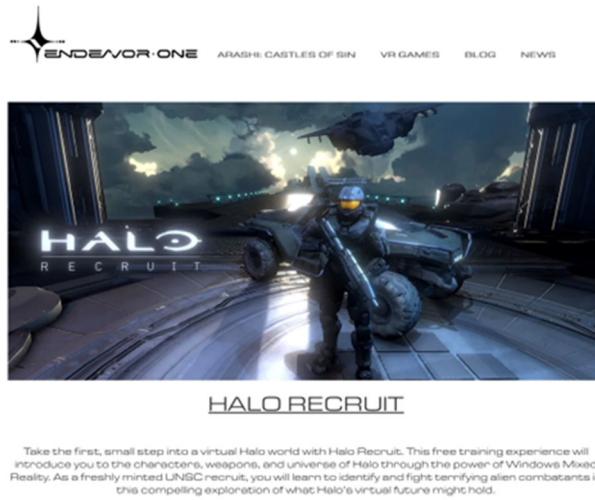
absolute pose parameters in the stable frame, which is the XRReferenceSpace - i.e., the geometrical description using coordinates and to generate a signal related to at least one of the absolute pose parameters. Here, Endeavor One provides signal for entire pose (all absolute pose parameters).

```
//
// Frame, Device Pose, and Views
//

[SecureContext, Exposed=Window] interface XRFrame {
  readonly attribute XRSession session;

  XRViewerPose? getViewerPose(XRReferenceSpace referenceSpace);
};
```

“c) an application employing said signal in said input, wherein said absolute pose of said item comprises at least three translational degrees of freedom and at least three rotational degrees of freedom, said at least one absolute pose parameter is related to at least one among said at least three translational degrees of freedom and said at least three rotational degrees of freedom by a mapping and at least one aspect of said application varies with said absolute pose of said item.” – Endeavor One uses an application employing the signal (all absolute pose parameters) of the item (VR HMD) including the at least three translational degrees of freedom and at least three rotational degrees of freedom in order to provide VR you can wear with immersive virtual reality attraction.



And they map all the degrees of freedom to at least one aspect of the application, such as navigating in three-dimensional space for full immersive content of the virtual reality attraction such as an experience or a game.



12. Similarly, Endeavor One infringes Claims 2, 11-15, 17-18, 25, 32, 36, 37, 39, 40, and 44-45, and 47-49 of the '540 Patent.

FIRST CLAIM FOR RELIEF

(Direct Infringement of the '540 Patent in Violation of 35 U.S.C. § 271(a))

13. ESPi refers to and incorporates herein by reference paragraphs 1-12.

1 14. The '540 Patent is valid and enforceable.

2 15. Endeavor One has infringed and continues to infringe at least 2, 11-15, 17-18, 25,
3 32, 36, 37, 39, 40, and 44-45, and 47-49 of the '540 Patent under 35 U.S.C. 271(a), either
4 literally or under the Doctrine of Equivalents, by making, using, selling or offering to sell the
5 Accused Products.

6 16. Endeavor One has had knowledge and notice of the '540 Patent, as well as of its
7 own infringement of the '540 Patent, since at least the date of the filing of this Complaint.

8 17. ESPi has been and continues to be damaged by Endeavor One's infringement of
9 the '540 Patent.

10 18. Endeavor One's infringement of the '540 Patent has been and continues to be
11 willful.

12 **SECOND CLAIM FOR RELIEF**

13 **(Inducing Infringement of the '540 Patent, in Violation of 35 U.S.C. § 271(b))**

14 19. ESPi refers to and incorporates herein by reference paragraphs 1-18.

15 20. Endeavor One is also liable for indirect infringement under 35 U.S.C. §271(b),
16 because Endeavor One knowingly induced and continues to induce the direct infringement of
17 one or more of the Claims by end-users and other third parties (i.e. wholesalers, retailers,
18 entertainment operators, e-sports venues and arcade operators) in the United States.

19 21. Said-users and other third parties have directly infringed at least Claims 2, 11-15,
20 17-18, 25, 32, 36, 37, 39, 40, and 44-45, and 47-49 of the '540 Patent by using or operating the
21 Accused Products, in the manner for which such Accused Products were and are designed and
22 marketed; that is when the Accused Products are used as Endeavor One intends them to be used,
23 the user and the act of usage thereof necessarily directly infringe the '540 Patent.

24 22. Endeavor One knowingly took active steps to induce end-users and other third
25 parties in the United States to engage in direct infringement of the '540 Patent since Endeavor
26 One knew that when the Accused Products are used for their intended purpose by third parties

1 and end users, such third parties and users directly infringe the claims of the '540 Patent. For
2 example, to induce such third parties' and users' infringement, Endeavor One, on information
3 and belief, provided, sold, or promoted the Accused Products to end-users or other third parties
4 along with specific instructions or training regarding the use of those products, which
5 instructions or training actively induced said end-users and other third parties to practice one or
6 more of the Claims and said instructions or training caused direct infringement of such Claims.

7 23. Endeavor One possessed the specific intent to induce direct infringement of the
8 Claims by end-users and other third parties which intent was manifested, inter alia, by its
9 instructions and/or training for using the Accused Products to end users and third parties, and
10 sale of the Accused Products to end users and third parties, and its knowledge of the '540 Patent
11 and its knowledge that any use of the Accused Products by end-users and other third parties
12 would necessarily directly infringe one or more of the claims of the '540 Patent.

13 24. Endeavor One knew or should have known that testing, demonstrating, marketing,
14 making, using, offering to sell, selling, and/or importing the Accused Products constituted
15 infringement of one or more of the claims of the '540 Patent, based on, among other things, the
16 reasons alleged in the foregoing paragraph.

17 25. By reason of the acts of Endeavor One alleged herein, ESPi has suffered damage
18 in an amount to be proved at trial.

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20 **PRAYER FOR RELIEF**

21 WHEREFORE, ESPi prays for relief as follows:

22 A. Judgment that Endeavor One has directly infringed, and induced others to
23 infringe, the '540 Patent either literally and/or under the doctrine of equivalents;

24 B. Judgment awarding ESPi general and/or specific damages, including a reasonable
25 royalty and/or lost profits, in amounts to be fixed by the Court in accordance with proof,

1 including enhanced and/or exemplary damages, as appropriate, as well as all of Endeavor One's
2 profits or gains of any kind from its acts of patent infringement.

3 C. Judgment awarding ESPi all of its costs, including its attorneys' fees, incurred in
4 prosecuting this action, including, without limitation, pursuant to 35 U.S.C. § 285 and other
5 applicable law;

6 D. Judgment awarding ESPi pre-judgment and post-judgment interest; and

7 E. Judgment awarding ESPi such other and further relief as the Court may deem just
8 and proper.

9 **JURY DEMAND**

10 Pursuant to Federal Rule of Civil Procedure 38(b), ESPi hereby demands a trial by jury
11 on all issues triable to a jury.

12 Dated: November 29, 2023

13 Respectfully submitted,

14
15 By: /s/ John A. Lee

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